Affect and Self-Focused Attention Revisited: The Role of Affect Orientation

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Research examining the influence of affect on self-focused attention has concentrated exclusively on the valence dimension (i.e., negative-positive) of affect. The authors propose that the dimension of affect orientation (i.e., reflective-social) illuminates considerably this relation. A reflective orientation refers to a tendency for inaction, whereas a social orientation refers to a tendency for action. Two experiments tested the hypothesis that two opposite-valenced but reflective affective states (i.e., sadness and contentment) heighten self-focused attention, whereas two opposite-valenced but social affective states (i.e., thrill and anger) reduce self-focused attention. Affect was induced via an imagination task (Experiment 1) or an imagination task combined with musical selections (Experiment 2). Self-focused attention was assessed through the state version of the Private Self-Consciousness (PSC) scale (Experiment 1) or the state version of the PSC plus a behavioral intention measure (Experiment 2). The results confirmed the hypothesis.

Suppose that you win the Publisher's Clearinghouse Sweepstakes. How will the resulting elation influence where you focus your attention? Will you focus your attention outward on the person toting the enormous check endorsed to you and on your overjoyed relatives, or inward, trying to ascertain how exactly this remarkable event is transforming you? To consider a very different example, suppose that a loved one dies. Will your sadness increase self-focused attention and initiate a downward spiral of withdrawal and rumination, or will your sadness lead you to seek out your friends and discuss the event with them? Now, suppose that you spend the day lying in the sun on a beautiful beach. Will your contentment make you self-focused, dwelling on how satisfying your life seems at the moment, or will your contentment make you outward-focused, analyzing the behavior of surrounding children busy at play? Finally, suppose that, in your absence, an insensitive colleague claims to your employer disproportionate credit on an important joint project. Will your anger lead to outward focus to seek an explanation from and possibly revenge against your colleague, or will your anger lead to passive withdrawal and a careful dissection of your thoughts regarding trust violation?

Answers to these questions can be derived, at least partially, from the field's state of knowledge concerning the influence of affective states on attentional focus. The relation between these two variables is the subject of the present article. We conceptualize attentional focus as falling on a bipolar continuum. One pole of the continuum represents attentional resources that are directed internally, namely to the self. The other pole of the continuum represents attentional resources that are directed externally, namely to other persons or environmental objects. Our definition of attentional focus is congruent with a tradition of conceptualizing attentional focus as a bidirectional construct (Carver, 1979; Duval & Wicklund, 1972).

Researchers in social, personality, and clinical psychology have been preoccupied mostly with one pole of the attentional continuum: self-focused attention. The construct of self-focused attention has been implicated in theoretical and empirical contributions to the areas of attitudes, attributions, and perspective taking (Bern-

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stein & Davis, 1982; Cohen, Dowling, Bishop, & Maney, 1985; Stephenson & Wicklund, 1983). Self-focused attention also has been linked to perceptions of control (Mikulincer, Gerber, & Weisenberg, 1990), alcohol consumption (Hull, 1981), belief perseverance (Davies, 1982), group interaction (Mullin, 1991), and prosocial behavior (Gibbons & Wicklund, 1982). In addition, elevated levels of self-focused attention have been associated with psychological disorders, such as anxiety (Carver & Scheier, 1986) and schizophrenia (Exner, 1973). Most important, heightened self-focused attention has been linked empirically to depression (Ingram & Smith, 1984; Larsen & Cowan, 1988; Pyszczynski & Greenberg, 1986).

PAST RESEARCH ON THE INFLUENCE OF AFFECT ON SELF-FOCUSED ATTENTION

The discovery of an association between depression and attentional focus sparked research that sought to examine the causal direction of the association between sadness—a key correlate of depression—and self-focused attention. Does sadness (as opposed to happiness or neutral affect) lead to self-focused attention? Theorists have suggested that sadness elicits avoidance and self-centeredness, whereas happiness elicits affiliative responding and other-centeredness (Cunningham, 1988a, 1988b). Sadness may signal a threatening change from ordinary experience; as a result, sadness captures cognitive resources and directs them toward self-examination—an efficient first step toward coping with the threat (Sedikides, 1992a). Alternatively, sadness may induce self-focus as the individual seeks to understand the source and meaning of the affective experience or seeks to manage and change the affective state (Wood, Saltzberg, & Goldsamt, 1990).

Two pioneering experiments by Wood et al. (1990) examined the role of sad affect in elevating self-focused attention. In Experiment 1, Wood et al. induced in participants a sad or a neutral affective state via a guided imagination task. They measured attentional focus through a pronoun choice task (Wegner & Giuliano, 1980); the number of selected first-person singular pronouns served as an index of self-focused attention. Participants in a sad state self-focused significantly more than did participants in a neutral state. In Experiment 2, Wood et al. (1990) induced in participants a sad, neutral, or happy affective state by playing a musical selection for 10 minutes. They measured attentional focus through both the Private Self-Consciousness (PSC) subscale of the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975) and an open-ended thought-listing task. Sad participants self-focused more than did neutral or happy participants on both the PSC scale and the coded thought-listing task. Happy participants, on the other hand, did not differ significantly from neutral participants on either of the self-focus measures. These results were replicated by Sedikides (1992b, Experiments 1-3) using different mood induction techniques (i.e., imagining hypothetical events that referred to either the self or to a friend and imagining hypothetical events that were either body-centered or not) and different dependent measures (i.e., a modified version of the PSC scale to reflect momentary self-focus and a coded thought-listing task).

Salovey (1992) only partially replicated the Wood et al. (1990) and Sedikides (1992b) results. Participants in Salovey's (1992) two experiments were placed into a sad, neutral, or happy affective state by imagining emotional events of personal (i.e., autobiographic) significance. A modified pronoun choice task was used to measure self-focus in the first experiment, and Linville's (1985) self-complexity procedure, in which participants sort 33 traits into separate meaningful piles to describe themselves, was used in the second experiment. Consistently with Wood et al. (1990) and Sedikides (1992b), Salovey (1992) found that sadness elicited higher self-focus than neutral affect. However, contrary to Wood et al. (1990) and Sedikides (1992b), Salovey (1992) found that happiness also elicited higher self-focus than neutral affect.

In summary, our literature review indicates that sad affect increases self-focus relative to neutral affect. However, the results for happy affect relative to neutral affect are equivocal. One purpose of the present research is to offer a resolution for this discrepancy.

THE ORIENTATION DIMENSION OF AFFECTIVE STATES

Although the research conducted so far has illuminated considerably the link between affective states and self-focused attention, we seek in the present article to expand this debate. To be specific, past research has examined predominantly sad and happy affect and tacitly has equated sad and happy affect with negatively valenced and positively valenced affect, respectively. Thus, past research has dealt exclusively with a single affect dimension—that of valence. This dimension is undeniably a ubiquitous and time-honored one (Osgood, Suci, & Tannenbaum, 1957; Scherer, Koivumaki, & Rosenthal, 1972; Sedikides, 1992a, 1995). We propose, however, that there is an equally important affect dimension that needs to be taken into consideration by researchers in this area. This is the dimension of affect orientation. The objective of the present investigation is to demonstrate that the intellectual landscape concerning the link between affective states and self-focused attention changes substantially when the dimension of affect orientation is introduced. The dimension of affect orientation may help to explain why previous research has obtained disparate results for happy affect on self-

focus as well as to suggest that the uniform results for sad affect are deceptive.

Many (if not most) affective states are elicited by interpersonal events (Frijda, 1986; Parkinson, 1997). Some affective states can orient people spontaneously toward either corrective or affiliative action. We call these states social affective states. Alternatively, other affective states can orient people spontaneously toward inaction. We call these states reflective affective states. Social affective states heighten awareness of the environment and thus instigate environment-oriented cognitive and behavioral responses. Reflective affective states, on the other hand, heighten awareness of the self and thus instigate self-oriented cognitive and behavioral responses. Tomkins (1962) proposed a similar dimension when he discussed the general tendency of some affective states either toward or away from others. Some emotions, such as sadness, are sociophobic, whereas other emotions, such as joy, are sociophilic.

One example of a social affective state is anger, a negatively-valenced state. Another example of a social affective state is thrill (also labeled in the literature as joy, euphoria, exhilaration, or elation), a positively-valenced state. We propose that these two social and opposite-valenced affective states will elicit relatively less self-focused attention or, alternatively, will elicit relatively greater external-focused attention. Examples of reflective affective states are sadness, a negatively valenced state, and contentment, a positively valenced state. We propose that these two reflective and opposite-valenced affective states will elicit relatively greater self-focused attention. Our rationale for these proposals draws from a diverse body of research that includes views of emotion from action readiness, cognitive appraisal, physiological, and evolutionary perspectives.

Rationale for Our Proposals

A venerable intellectual tradition has conceptualized emotions in terms of tendencies for action or inaction. Cannon (1927) believed that emotions are physiological changes that mobilize an organism for action. Arnold (1960) suggested that an emotional state serves as an action tendency, particularly a tendency for approach or withdrawal. Frijda (1987) defined action readiness as "readiness to engage in action for establishing, maintaining or breaking the relation with particular aspects of the environment" (p. 132). According to Frijda (1988), "Emotions exist for the sake of signaling states of the world that have to be responded to, or that no longer need response and action" (p. 354). More specifically, Frijda (1986, p. 469) introduced the concept of action readiness change, which includes both action readiness (i.e., an impulse to embrace, flee, or strike) and action unreadiness (i.e., a lack of impulse, an apathy, or listlessness). In short, some emotions equip an organism to engage its environment in an active way, whereas other emotions signal that action is unnecessary or even counterproductive.

The conceptualization of emotion as action readiness change is congruent with the view of emotions from the perspective of cognitive appraisal theory. Emotions, according to this perspective, consist of somatic changes, cognitive appraisal, and action impulses (Clore, Ortony, Dienes, & Fujita, 1993; Ellsworth, 1991; Lazarus, 1968, 1991; Mandler, 1984; Ortony, Clore, & Collins, 1988; Schachter, 1964). A particular affective experience begins with the cognitive construal or meaning analysis of a situation. The key element that differentiates one affective experience from another is the subjective appraisal of the situation that elicits it. In agreement, Frijda (1986) pointed out that cognitive appraisals can result in different action readiness modes.

In addition, Frijda's (1986) emphasis on emotions as preparation for action or inaction overlaps with evolutionarily based accounts of emotion (Ekman, 1992; Izard, 1991; Plutchik, 1980, 1994). These accounts emphasize overt behavior rather than behavioral readiness and conceptualize affective states as adaptive responses (e.g., fight or flight preparedness). For example, Plutchik's (1958, 1990, 1994) psychoevolutionary theory of emotions describes affective states as responses to basic environmental challenges, including responding to potential mates, reacting to predators, gathering food, establishing territoriality, and caring for offspring.

In summary, emotion theorists have long differentiated between affective states that direct the organism toward either action or inaction. We capitalize on this distinction in proposing that (a) anger and thrill (the social affective states) are action-directing affective states, whereas sadness and contentment (the reflective affective states) are inaction-directing states; and (b) anger and thrill induce relatively less self-focused attention, whereas sadness and contentment induce relatively greater self-focused attention. We articulate our proposals below.

Social Affective States: Anger and Thrill

Anger. In *The Expression of the Emotions in Man and Animals*, Darwin (1872/1965) proposed that emotions serve two functions: communicative (e.g., facial display) and survival (e.g., fear response preparing an organism for flight). For example, expressions of anger often serve to prevent the instigation of intraspecies aggression. Thus, it is likely that the successful encoding and decoding of anger will confer a reproductive advantage.

Researchers have extended Darwin's functional view of emotions. Anger equips the organism to confront environmental pressors (e.g., predators) and directs the organism toward preparation for fight or flight (Berkowitz, 1990, 1993; Frijda, 1986; Plutchik, 1958, 1990, 1994). Indeed, anger is associated with physiological arousal (e.g., increased blood pressure; Schwartz, Weinberger, & Singer, 1981) and felt somatic changes (e.g., pounding heart and quickening pulse; Davitz, 1969) that prepare an organism to either engage or escape from a potential enemy.

Anger is conceptualized by some cognitive appraisal theorists as a disapproval of another person's behavior and a displeasure with the resulting consequences of this behavior (Clore et al., 1993). The cognitive construal of anger includes attributions about an outside agent. That is, the eliciting conditions of anger emphasize the characteristics of the external environment and the need for intervention to correct aspects of the environment more than they emphasize an individual's private thoughts and goals. Empirical results have been consistent with this view. Smith and Ellsworth (1985) found that anger was associated with attributions of responsibility to another. Such attributions regarding an outside agent induce focus on this agent as well as action readiness to engage this agent in some fashion. Keltner, Ellsworth, and Edwards (1993) postulated that anger renders the actions of other persons relatively salient. This heightened salience leads to biased event likelihood and responsibility judgments. Indeed, participants placed in an angry state gave higher estimates for the likelihood of humanly caused events as opposed to situationally caused events and perceived human agents as more responsible than situational forces for a mishap. In summary, anger is likely to instigate an action tendency, directing the organism's attention toward aspects of the environment. Thus, we classify anger as a social affective state that will elicit relatively less self-focused attention.

Thrill. Positively valenced emotions, relative to negatively valenced emotions, have been underemphasized in psychological and psychophysiological research. The evolutionary approach to emotions emphasizes threats to an organism's well-being and therefore has concentrated almost exclusively on negative affective states. In addition, because negative states are implicated in pathology, practitioners have focused their theoretical and empirical efforts predominantly on negatively toned emotions to the neglect of positively toned ones. Therefore, theoretical perspectives have often neglected to consider the wide variety of specific positive emotions, a gap other emotion researchers have noted (Ellsworth & Smith, 1988; Lazarus, Kanner, & Folkman, 1980). Although there is some evidence that, relative to negative affective states, positive affective states are less differentiated and more subject to blending, a variety of positive states can be distinguished by particular appraisal configurations (Ellsworth & Smith, 1988). Several emotion theorists (e.g., Ortony et al., 1988) have not explicitly treated thrill and contentment as distinct positive states other than on the dimension of intensity. However, we propose that thrill and contentment differ in action readiness change and have opposite effects on self-focused attention. Thrill orients people outward; contentment orients people inward.

Thrill is associated with increased action readiness. Thrill has been linked with an open orientation that serves to strengthen social bonds (Frijda, 1986; Izard, 1991). Roseman (1984) proposed that thrill leads to stimulation seeking. Lazarus et al. (1980) maintained that emotions such as thrill sustain efforts to achieve important goals. Plutchik (1970) proposed that thrill evolved from a more primitive approach response. Therefore, thrill facilitates the performance of adaptive approach behaviors such as exploration, affiliation, and reproduction (Cunningham, 1988b; Strickland, Hale, & Anderson, 1975). Cunningham (1988b) found that participants in an elated affective state, relative to participants in a neutral state, expressed preferences for intimate and social activities, such as attending a party or spending time with friends. In summary, thrill is associated with an approach orientation toward the environment. We propose that this social affective state will elicit relatively less self-focused attention.

Reflective Affective States: Sadness and Contentment

Sadness. The affective state of sadness typically is elicited by such events as a personal injury or setback or the loss of a loved one. Appraisal theorists have emphasized the role of loss and controllability in the experience of sadness. Sadness is accompanied by the belief that the unpleasant event is uncontrollable and that no action can rectify its inevitability (Smith & Ellsworth, 1985). It is futile to struggle to regain something that is irretrievable. Inaction is the consequence. In fact, sadness is linked with a tendency toward inaction. Specifically, sadness is associated with passivity, absence of relational activity, and withdrawal (Frijda, 1986); with a feeling of resignation (Ekman & Friesen, 1975); and with inaction and recovery (Roseman, 1984).

Keltner et al. (1993) postulated that sadness reduces the saliency of others' actions. Hence, judgments of the causes of events should be biased toward situational factors rather than toward the actions of others. Indeed, participants placed in a sad affective state perceived situationally caused events (as opposed to events caused

by humans) as more likely and assigned relatively greater responsibility to impersonal, situational forces.

The retrenchment and barricading of the self from the outside world may be an adaptive way to cope with a permanent loss (Roseman, 1984). Turning inward avoids reminders of the loss (Frijda, 1986) and may enable one to rest, recover, and redirect one's goals. The evaluation of self-relevant goals, the consideration of how those goals have been thwarted, and the adjustment of goals are processes that are best served by an inward orientation (Ortony et al., 1988). In short, sadness instigates an inaction tendency and an avoidance orientation with regard to the outside world and an inclination to turn inward and consider the implications of the unpleasant event for the self. Thus, we propose that sadness will elicit relatively greater self-focused attention.

Contentment. The state of contentment is a positively valenced affective state associated with reduced action readiness. Goals have been met and careful attention to the environment is not necessary. Scherer (1984) related contentment to the satisfaction of needs and goals. Likewise, Ellsworth and Smith (1988) conceptualized contentment ("tranquillity") as feeling safe and comfortable with one's achievements and as the perception that obstacles to one's goals are either nonexistent or surmountable, and thus, little further effort is necessary. Lazarus et al. (1980) referred to contentment as a "breather" affective state. Breather states allow individuals to free themselves, at least temporarily, from the stress of a negative life event and to engage in diversionary and pleasurable activity. Phenomenologically, contentment has been described as including feeling relaxed, quiet, free of conflict, and in touch with physical sensations (Davitz, 1969). The reduced action readiness associated with contentment is adaptive. The organism can rest, replenish resources, appreciate the achievement of important goals, and reflect on new challenges. In sum, contentment is a reflective emotional state that will elicit relatively greater self-focused attention.

EXPERIMENT 1

Method

PARTICIPANTS AND EXPERIMENTAL DESIGN

Participants in the experiment were 84 University of North Carolina at Chapel Hill (UNC-CH) undergraduate students in partial fulfillment of an introductory psychology course option. We tested participants in groups of 2 to 8. We set up the experimental room in such a way that participants were unable to see each other when seated.

The experimental design was a one-way between-participants factorial. The four conditions of the design corresponded to the four affective states of sadness, contentment, thrill, and anger. We randomly assigned participants to the four experimental conditions.

PROCEDURE

Participants were placed into an affective state via a two-page handout. The first page asked participants to imagine one of four different scenes. In the sadness condition, participants imagined "attending a funeral for [their] closest friend," an event that made them feel "extremely sad." In the contentment condition, participants imagined "lying on the beach on a perfect day," an event that made them feel "extremely content." In the thrill condition, participants imagined "winning the Publisher's Clearinghouse Sweepstakes for $10 million," an event that made them feel "extremely thrilled." In the anger condition, participants imagined that they felt "extremely angry" because they "just completed a two-person project for an important class. [They] did all the work, but received a very bad grade. [Their] project partner told the professor that he or she did all the work." The presence of other individuals in the imagined events was held constant. That is, the details of each visualization experience tacitly included others (i.e., mourners at the funeral, friends at the beach, relatives present for the sweepstakes windfall, and the insensitive collaborator). In all four conditions, we instructed participants to picture the details of the situation, experience the resulting affect, and react as if the situation were real. After 2 minutes, participants turned to the second page, where they continued the imagination task and spent 3 minutes writing how they felt about the event.

On completion of the affect induction procedure, participants responded to a manipulation check. They indicated how they felt at that moment on 12 7-point scales, ranging from 1 (*not at all*) to 7 (*very much*). We generated three synonyms for each of the four affective states. Sadness was indexed by the adjectives *sorrowful*, *dejected*, and *depressed*. Contentment was indexed by the adjectives *satisfied*, *calm*, and *tranquil*. Thrill was indexed by the adjectives *overjoyed*, *exhilarated*, and *ecstatic*. Finally, anger was indexed by the adjectives *enraged*, *furious*, and *mad*.

The 10-item PSC scale, modified to measure state rather than trait self-consciousness (Sedikides, 1992b), constituted our measure of self-focused attention.[1] We chose the PSC scale to maintain continuity in this research tradition because it has been used more than any other single measure (Sedikides, 1992b; Wood et al., 1990). Example items of this scale are "I'm right now alert to changes in my mood," and "I'm right now trying to figure myself out." Participants rated each item according to a 9-point scale, ranging from 1 (*extremely uncharacteristic of me*) to 9 (*extremely characteristic of me*), answering the question, "To what extent is each of the

TABLE 1: Manipulation Check Results in Experiment 1

	Means for Induced Affect			
Affect Condition	*Sad*	*Thrilled*	*Content*	*Angry*
Sad	5.54	1.33	2.64	4.38
Thrilled	1.21	5.92	4.71	1.02
Content	1.38	4.98	6.37	1.02
Angry	4.49	1.76	2.51	5.21

NOTE: Participants rated how they felt momentarily on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*).

following statements characteristic of yourself right now?" Finally, all participants read a page of jokes to retain or repair their affective states and were thoroughly debriefed.

Results

SCALE RELIABILITIES

We calculated reliability coefficients (Cronbach's α) for each set of three adjectives that indexed the four affective states. For the sad items (i.e., sorrowful, dejected, depressed), α = .90. For the content items (i.e., satisfied, calm, tranquil), α = .83. For the thrilled items (i.e., overjoyed, exhilarated, ecstatic), α = .97. For the angry items (i.e., enraged, furious, mad), α = .97. Consequently, we computed composite scores for sad, content, thrilled, and angry states. The reliability for the state PSC scale was adequate, α = .65.[2] As a result, we computed a composite score for the 10 state PSC items.

MANIPULATION CHECKS

We present the results of our successful manipulation checks in Table 1. We analyzed the manipulation check data both within participants (i.e., the rows of Table 1) and between participants (i.e., the columns of Table 1). First, we computed an omnibus *F* for participants in each of the sad, content, thrilled, and angry conditions separately, that is, in each of the four rows of Table 1. The omnibus *F*s were all significant, *F*s(3, 60) > 41.61, *p*s < .0001.

Next, we performed within-participants planned contrasts separately for each of the four conditions. That is, in each condition, we contrasted the induced affective state with the other three affective states to establish that participants in each condition experienced the induced affective state to a greater degree than they experienced each of the remaining three affective states. Participants in the sad condition experienced more sadness (M = 5.54) than they experienced contentment, thrill, and anger combined (M = 2.78), $F(1, 20) = 162.85$, $p < .0001$. Participants in the content condition experienced more contentment (M = 6.37) than they experienced sadness, thrill, and anger combined (M = 2.46), $F(1, 20) = 1446.37$, $p < .0001$. Participants in the thrilled condition (M = 5.92) felt more thrill than they felt sadness, contentment, and anger combined (M = 2.31), $F(1, 20) = 143.49$, $p < .0001$. Finally, participants in the angry condition experienced more anger (M = 5.21) than they experienced sadness, contentment, and thrill combined (M = 2.92), $F(1, 20) = 42.03$, $p < .0001$.

We then contrasted the induced affective state with the other same-valenced affective state to establish that participants in each condition experienced the induced affective state to a greater degree than the same-valenced affective state. Participants in the sad condition reported feeling more sad than angry, $F(1, 20) = 13.89$, $p < .001$. Participants in the content condition reported feeling more content than thrilled, $F(1, 20) = 20.33$, $p < .001$. Participants in the thrilled condition reported feeling more thrilled than content, $F(1, 20) = 6.94$, $p < .016$. Finally, participants in the angry condition reported feeling more angry than sad, $F(1, 20) = 5.83$, $p < .025$.

The second way in which we analyzed the manipulation check data involved computing four between-participants omnibus *F*s. Affective condition (i.e., sad, content, thrilled, angry) was the independent variable in all four analyses. Each of the four affective states served separately as a dependent measure. These analyses refer to the four columns of Table 1. All omnibus *F*s were significant, *F*s(3, 80) > 59.98, *p*s < .0001.

Next, we contrasted participants in the affective condition who matched the induced affective state against participants in the remaining three affective conditions. Participants in the sad condition (M = 5.54) felt more sadness than did participants in the remaining three conditions combined (M = 2.36), $F(1, 80) = 285.43$, $p < .0001$. Participants in the content condition (M = 6.37) felt more contentment than did participants in the remaining three conditions combined (M = 3.29), $F(1, 80) = 125.70$, $p < .0001$. Participants in the thrilled condition (M = 5.92) felt more thrill than did participants in the remaining three conditions combined (M = 2.69), $F(1, 80) = 144.93$, $p < .0001$. Finally, participants in the angry condition (M = 5.21) felt more anger than did participants in the remaining three conditions combined (M = 2.14), $F(1, 80) = 140.99$, $p < .0001$.

Finally, we contrasted participants in the affective condition who matched the induced affective state with participants in the other same-valenced affective state. Participants in the sad condition felt more sadness than did participants in the angry condition, $F(1, 80) = 20.65$, $p < .0001$. Participants in the content condition felt more contentment than did participants in the thrilled condition, $F(1, 80) = 24.08$, $p < .0001$. Participants in the thrilled condition felt more thrill than did participants in the content condition, $F(1, 80) = 8.14$, $p < .006$. Participants in the angry condition felt more anger than

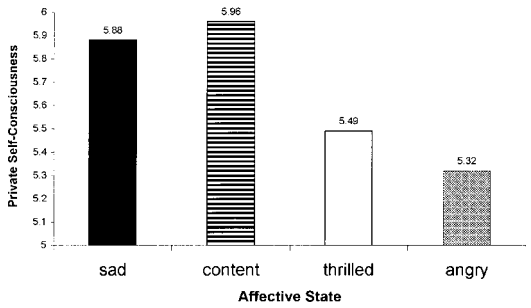

Figure 1 Self-focused attention (indexed by state private self-consciousness) as a function of affective state in Experiment 1.

did participants in the sad condition, $F(1, 80) = 6.80$, $p < .011$.

ATTENTIONAL FOCUS

We hypothesized that attentional focus would vary as a function of the orientation rather than the valence dimension of affect. Specifically, we predicted that one negative state (sadness) and one positive state (contentment) would elicit relatively greater self-focused attention, whereas another negative state (anger) and another positive state (thrill) would elicit relatively less self-focused attention. The results are presented in Figure 1. Although the main effect was not significant, $F(3, 80) = 1.68$, $p < .18$, we proceeded with the critical and planned contrast comparison. We contrasted the two reflective affective states against the two social affective states. Sad and content participants were significantly more self-focused ($M = 5.92$) than were angry and thrilled participants ($M = 5.41$), $F(1, 80) = 4.76$, $p < .032$. As predicted, the two reflective affective states induced higher self-focused attention than did the two social affective states.

The two reflective affective states did not differ in the degree of self-focused attention they elicited (M sadness = 5.88; M contentment = 5.96), $F(1, 80) = 0.06$, $p < .81$. Similarly, the two social affective states did not differ in the degree of self-focused attention they elicited (M anger = 5.32; M thrill = 5.49), $F(1, 80) = 0.23$, $p < .63$.

CONCEPTUAL REPLICATION OF PAST FINDINGS

Past research on the influence of affective states on self-focused attention has examined, almost exclusively, happy and sad affective states. The present research emphasizes the relevancy of the affect orientation dimension. Nevertheless, in an attempt to conceptually replicate past findings, we compared participants in the sad condition with participants in the thrill condition on their degree of self-focused attention. Sad participants ($M = 5.88$) experienced somewhat higher levels of self-focused attention than did thrilled participants ($M = 5.49$), $F(1, 80) = 1.39$, $p < .24$. The effect, although nonsignificant, is directionally consistent with the finding that sad participants are more self-focused than happy participants (Sedikides, 1992b; Wood et al., 1990).

EXPERIMENT 2

Experiment 1 showed that reflective affective states (i.e., sadness and contentment) induce self-focused attention to a greater degree than do social affective states (i.e., anger and thrill). This is the first experiment that demonstrates the relevancy of the affect orientation dimension to the debate concerning the impact of affective states on self-focused attention. Thus, the novel findings of Experiment 1 invite replication.

In Experiment 2, we also modified the affect induction task for the purpose of augmenting the specificity of each affective state. Same-valenced affective states, such as anger and sadness, often covary both naturalistically and in experimental affect induction settings (Berkowitz, 1990, 1993; Ortony et al., 1988; Scherer & Tannenbaum, 1986; Termine & Izard, 1988; Wickless & Kirsch, 1988). An overlap may also exist in the case of the positively valenced emotions of thrill and contentment. Indeed, as mentioned previously, the two affective states often have been considered as essentially equivalent in the literature except for their assumed differences in intensity level (Clore et al., 1993). Thus, to disambiguate the effects of each affective state on self-focused attention, we replaced the experimenter-provided vignettes with idiosyncratic (i.e., autobiographic) events, and we instructed participants to imagine a recent personal event that had caused only one of the two same-valenced affective states (e.g., an event that made participants feel angry but not sad).

Furthermore, in Experiment 2 we modified the affect induction task to augment the strength of each affective state. Researchers have suggested that affect induction tasks can combine additively to elicit affective states (Bower, 1981; Clark, 1983). Indeed, Mayer, Allen, and Beauregard (1995) were successful in inducing specific affective states (happiness, anger, fear, and sadness) via a combination of music and imagery. Presented in isolation, music induces fairly nonspecific affective states, but it can strengthen the induction of an affective state when it is presented in the background with a targeted imagery task. Moreover, multiple inductions enhance the specificity of affective states (Mayer et al., 1995). Thus, we elected to add musical selections to the imagery task. We expected that the superimposition of music on the imagery task would augment the strength of each affective state and further enhance its specificity.

Finally, the most noteworthy modification in Experiment 2 was the addition of a dependent measure that assessed behavioral tendencies. Cognitive appraisal theorists, despite emphasizing the role of cognition in affective experience, have noted that emotions often provide motivation toward certain behavioral outcomes (Clore et al., 1993). In agreement, Carver and Scheier (1990) conceptualized emotions as cues to the pursuit of superordinate goals. For other emotion researchers, the link from affect to behavior is seen as more direct and fundamental. Some researchers have characterized the essential feature of emotion as action readiness (Frijda, 1986) or action dispositions (Lang, 1993). Most important, researchers who have postulated the evolution of emotions as adaptive responses emphasize the motivational properties of affective states (Berkowitz, 1993; Ekman, 1992; Plutchik, 1994). For example, Ekman (1992) emphasized that emotions serve an adaptive communicative function. According to Ekman, "The primary function of emotion is to mobilize the organism to deal quickly with important interpersonal encounters, prepared to do so in part, at least, by what types of activity have been adaptive in the past" (p. 171). After the affect induction task and the completion of the state PSC, participants rated the extent to which they intended at that moment to perform introverted behaviors (e.g., reading a book or taking a solitary walk). We wanted to know whether reflective and social affective states have differential behavioral implications. Will the reflective affective states increase the likelihood of expressing the intention to perform introverted behaviors relative to the social affective states?

Pilot Study 1

Previous researchers (Brown & Mankowski, 1993; Wood et al., 1990) were successful in inducing sadness by using Prokofiev's "Russia under the Mongolian Yoke" played at half speed. We employed this musical selection in Experiment 2. In addition, we chose (a) George Winston's "December" to induce a content state, (b) Tchaikovsky's "1812 Overture" and Wagner's "The Ride of the Valkyries" to induce a thrilled state, and (c) a selection by Nurse with Wound titled "Six Buttons of Sex Appeal" to induce an angry state.

We pretested the new musical selections to ensure that they were effective in inducing the intended affective states. Twenty-one UNC-CH introductory psychology students listened to (in counterbalanced order) and rated the musical selections on how sad, content, thrilled, and angry the selections made them feel (see Table 2).

Our data analytic strategy of the music pilot study mirrored the strategy that we used to analyze the manipulation check data in Experiment 1. We examined both within-musical selection effects (i.e., rows of Table 2) and between-musical selection effects (i.e., columns of Table 2). All omnibus Fs were significant, Fs(3, 60) > 6.88, ps < .001.

TABLE 2: Music Pilot Study Results in Experiment 2

	Means for Induced Affect			
Musical Selection	*Sad*	*Thrilled*	*Content*	*Angry*
Thrilled	1.52	4.57	3.05	1.33
Content	3.48	2.24	5.62	1.29
Angry	2.19	1.48	1.24	3.95

NOTE: Participants rated how they felt momentarily on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*).

The content, thrilled, and angry musical selections induced successfully the intended affective states. Analyzing within musical selections, participants experienced the intended affective state for each musical selection more than they did the other three states combined, Fs(1, 20) > 24.85, p < .001, and felt the intended affective state more than the other same-valenced state (e.g., they felt more content than thrilled after listening to the content music), Fs(1, 20) > 9.45, p < .001. Analyzing across the musical selections, the content, thrilled, and angry selections elicited the intended affective state more than the other three selections, Fs(1, 20) > 36.43, p < .0001. In addition, the selections induced the intended affective state significantly more than the other same-valenced selection (e.g., the thrilled music elicited more thrill than did the content music), Fs(1, 20) > 26.93, p < .001.

Pilot Study 2

Participants were 20 UNC-CH introductory psychology students who rated 10 behaviors, which are presented in the appendix, for introversion/extraversion on a 9-point scale ranging from 1 (*very introverted*) to 9 (*very extraverted*). The means for the introverted behaviors ranged from 2.10 to 5.05, and the grand mean was 3.14. This grand mean differed significantly from the scale mean of 5, $t(19) = 9.81$, p < .001. The behaviors were perceived by our targeted population as introverted.

Main Experiment

PARTICIPANTS AND EXPERIMENTAL DESIGN

Participants in the experiment were 132 UNC-CH introductory psychology students in groups of 1 to 6 and in partitioned cubicles that prevented them from seeing each other when seated.

The experimental design was a one-way between-participants factorial. Participants were assigned randomly to one of the four affective states (i.e., sadness, thrill, contentment, anger).

PROCEDURE

Two affect induction tasks combined to elicit sad, content, thrilled, or angry affect. Participants listened to an affect-inducing musical selection on personal cassette players equipped with headphones. As participants listened to the music, they engaged in an imagination task that was administered via a two-page handout.

When the research assistant distributed the imagery instruction sheets, participants put on the headphones and turned on the music. Participants continued to listen to the music through the completion of the dependent measures. The first sheet instructed participants to imagine a recent personal (i.e., autobiographical) event. After 2 minutes, participants turned to the second page of the imagery handout, where they were instructed to continue the imagination task and to write for 4 minutes about how they felt concerning the scene they had imagined.

We asked participants to imagine recent personal events. Participants in the sad condition recalled a recent event that made them feel "extremely sad but not angry. This is an event where something terrible and unexpected happened to you. It was one of those events that left a scar of deep sadness in you." Participants in the content condition recalled a recent event that made them feel "extremely content but not thrilled. This is an event where you felt very comfortable, positive, and relaxed. Life seemed easy and good." Participants in the thrilled condition recalled a recent event that made them feel "extremely thrilled, but not content. This is an event where something very unexpected and exciting happened to you. You were on Cloud Nine for a while." Participants in the angry condition recalled a recent event that made them feel "extremely angry, but not sad. This is an event where something very unfair happened to you, but you had no control to change the event. It wasn't your fault, and there was nothing you could do about it." Furthermore, participants were instructed to imagine the event as vividly as possible, picture the details of the event, and feel the same feelings that they experienced at the time the event occurred.

On completion of the affect induction task, participants responded to an affect manipulation check. Informal conversations with participants at the end of Experiment 1 led to a minor modification of the manipulation check questions in Experiment 2 for the sake of clarity. The adjectives *enraged*, *overjoyed*, and *satisfied* were replaced by *irritated*, *enthusiastic*, and *peaceful*, respectively. Thus, all participants rated how sad (sorrowful, dejected, depressed), content (peaceful, calm, tranquil), angry (irritated, furious, mad), and thrilled (enthusiastic, exhilarated, ecstatic) they felt at that moment.

Next, participants completed the state PSC scale and then rated the self-descriptiveness of the 10 introverted behaviors. Participants rated the behaviors on a 9-point scale that ranged from 1 (*does not at all describe me*) to 9 (*most definitely describes me*). On completion of the dependent measures, participants turned off the music and indicated on a 7-point scale the extent to which the music distracted them from imagining the scene (1 = *not at all*, 7 = *very much*). At the end, participants read a page of jokes and were debriefed.

TABLE 3: Manipulation Check Results in Experiment 2

	Means for Induced Affect			
Affect Condition	*Sad*	*Thrilled*	*Content*	*Angry*
Sad	4.23	1.71	3.99	2.84
Thrilled	2.05	4.66	3.78	2.13
Content	2.06	3.13	5.49	1.28
Angry	3.02	2.51	2.89	3.80

NOTE: Participants rated how they felt momentarily on a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*).

Results and Discussion

SCALE RELIABILITIES

We calculated reliability coefficients for each set of three adjectives that indexed the four affective states. For the sad items, $\alpha = .83$. For the content items, $\alpha = .88$. For the thrilled items, $\alpha = .88$. Finally, for the angry items, $\alpha = .88$. Therefore, we computed composite scores for sad, content, thrilled, and angry affective states.

The reliability for the 10-item state PSC scale was relatively low, $\alpha = .57$.[3] The reliability for the 10 introverted behaviors was adequate, $\alpha = .68$. We calculated composite PSC and introverted behavior scores for each participant.

MANIPULATION CHECKS

We present manipulation check means in Table 3. As in Experiment 1, we analyzed the results across both columns and rows. First, we conducted within-participants analyses (i.e., rows of Table 3). All one-way ANOVAs were significant, $Fs(3, 96) > 4.35$, $ps < .006$. Participants in the sad condition felt more sadness ($M = 4.23$) than contentment, thrill, and anger combined ($M = 2.85$), $F(1, 128) = 13.29$, $p < .001$, and felt more sadness than anger, $F(1, 128) = 30.92$, $p < .0001$. Participants in the content condition felt more contentment ($M = 5.49$) than thrill, sadness, and anger combined ($M = 2.16$), $F(1, 128) = 69.07$, $p < .0001$, and felt more contentment than thrill, $F(1, 128) = 8.41$, $p < .004$. Participants in the thrilled condition felt more thrill ($M = 4.66$) than they felt sadness, contentment, and anger combined ($M = 2.65$), $F(1, 128) = 40.31$, $p < .0001$, and felt more thrill than contentment, $F(1, 128) = 6.39$, $p < .017$. Finally, participants in the angry condition felt more anger ($M = 3.80$) than they felt sadness, contentment, and thrill combined (M

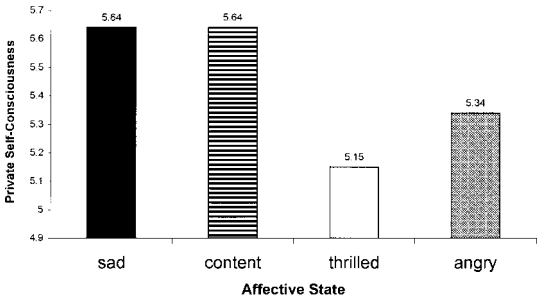

Figure 2 Self-focused attention (indexed by state private self-consciousness) as a function of affective state in Experiment 2.

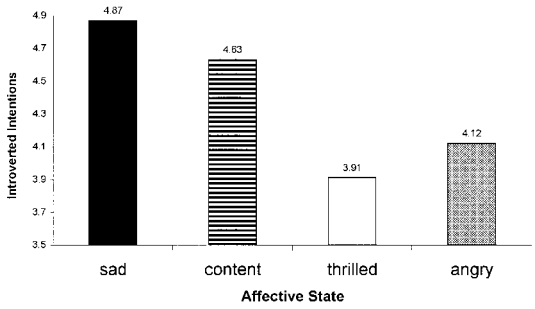

Figure 3 Self-focused attention (indexed by endorsement of introverted behaviors) as a function of affective state in Experiment 2.

= 2.80), $F(1, 128) = 6.83$, $p < .010$, and felt more anger than sadness, $F(1, 128) = 9.70$, $p < .002$.

Subsequently, we conducted between-participants analyses (i.e., columns of Table 3). All one-way ANOVAs were significant, $Fs(3, 128) > 4.50$, $ps < .005$. Participants in the sad condition ($M = 4.23$) felt sadder than participants in the content, thrilled, and angry conditions combined ($M = 2.38$), $F(1, 128) = 46.43$, $p < .0001$, and felt sadder than participants in the angry condition, $F(1, 128) = 13.18$, $p < .001$. Participants in the content condition ($M = 5.49$) felt more content than participants in the sad, thrilled, and angry conditions combined ($M = 2.45$), $F(1, 128) = 49.14$, $p < .0001$, and felt more content than participants in the thrilled condition, $F(1, 128) = 25.46$, $p < .0001$. Participants in the thrilled condition felt more thrill ($M = 4.66$) than participants in the remaining three conditions combined ($M = 2.45$), $F(1, 128) = 71.90$, $p < .0001$, and felt more thrill than participants in the content condition, $F(1, 128) = 22.86$, $p < .001$. Participants in the angry condition felt more anger than participants in the remaining conditions combined, $F(1, 128) = 40.93$, $p < .0001$, and felt more anger than participants in the sad condition, $F(1, 128) = 8.55$, $p < .004$.

PRIVATE SELF-CONSCIOUSNESS

As in Experiment 1, we predicted that attentional focus would vary as a function of affect orientation. Although the main effect for the state PSC scale was not significant, $F(3, 128) = 1.61$, $p < .19$, we proceeded with the critical and planned contrast. Figure 2 shows the state PSC scores, broken down by affective state.

The principal planned contrast compared the two reflective affective states against the two social affective states. Sad and content participants ($M = 5.64$) were significantly more self-focused than were thrilled and angry participants ($M = 5.25$), $F(1, 128) = 4.36$, $p < .039$. As in Experiment 1, the two reflective affective states induced higher self-focused attention than did the two social affective states.

We also contrasted the two reflective affective states. Sad participants ($M = 5.64$) and content participants ($M = 5.64$) did not differ significantly from each other in degree of self-focused attention, $F(1, 128) = 0.01$, $p < .99$. Despite being opposite-valenced affective states, sadness and contentment elicited equal levels of self-focused attention, replicating the results of Experiment 1. Similarly, we contrasted the two social affective states. Thrilled ($M = 5.15$) and angry ($M = 5.34$) participants did not differ significantly in self-focused attention, $F(1, 128) = 0.48$, $p < .49$. Again, despite being opposite-valenced affective states, thrill and anger elicited essentially equivalent levels of self-focused attention, also replicating the results of Experiment 1.

INTROVERTED BEHAVIORS

Participants reported the extent to which they intended momentarily to perform introverted behaviors. We conducted a one-way ANOVA on the four affect conditions. Figure 3 illustrates the means for the four affective states. The main effect was significant, $F(3, 128) = 3.70$, $p < .014$. We proceeded to conduct the same planned contrasts on the introverted behaviors composite scores that we conducted on the state PSC composite scores.

The principal contrast compared the two reflective affective states against the two social affective states. Sad and content participants ($M = 4.75$) endorsed the performance of introverted behaviors significantly more than did angry and thrilled participants ($M = 4.02$), $F(1, 128) = 10.10$, $p < .002$. As predicted, the reflective

affective states induced greater endorsement of introverted behaviors than did the social affective states.

We also contrasted the two reflective affective states. Sad ($M = 4.87$) and content ($M = 4.63$) participants did not differ significantly in their endorsement of introverted behaviors, $F(1, 128) = 0.55$, $p < .46$. Finally, we contrasted the two social affective states. Angry ($M = 4.12$) and thrilled ($M = 3.91$) participants did not differ significantly in their endorsement of introverted behaviors, $F(1, 128) = 0.44$, $p < .51$.

A CONCEPTUAL REPLICATION OF PAST FINDINGS

As in Experiment 1, we compared participants in the sad condition with participants in the thrilled condition. Sad participants ($M = 5.64$) tended to be more self-focused on the state PSC scale than thrilled participants ($M = 5.15$), $F(1, 128) = 3.34$, $p < .070$. Furthermore, sad participants ($M = 4.87$) were more self-focused on the introverted behaviors scale than thrilled participants ($M = 3.91$), $F(1, 128) = 8.70$, $p < .004$. That is, sad participants were more likely to endorse the performance of introverted behaviors than were thrilled participants. These results are consistent with those of Experiment 1 and conceptually replicate past research (Sedikides, 1992b; Wood et al., 1990).

IMPACT OF THE MUSICAL SELECTIONS: ALTERNATIVE HYPOTHESES

Given that affect inductions typically are short-lived (Sedikides, 1994), we hoped to prolong the duration of affect by having participants continue to listen to the music as they completed the dependent measures. However, a potential problem arises: Is it possible that the musical selections, because of the different levels of distraction they may have induced, influenced self-focused attention to a different degree? Can differential musical selection distractibility account for our findings?

Overall, the social affective state musical selections indeed were rated as more distracting than the reflective affective state musical selections, $F(1, 128) = 15.98$, $p < .001$. However, this effect reached significance because the angry music was perceived as more distracting than the remaining selections. Participants in the angry condition reported that the music was moderately distracting during the imagery task ($M = 3.52$ on a 7-point scale), and this group differed significantly from each of the other three groups, Fs$(1, 128) > 7.58$, ps$ < .007$. However, the thrilled ($M = 2.39$), sad ($M = 1.85$), and content ($M = 1.76$) musical selections did not differ significantly in perceived distraction, Fs$(1, 128) < 2.45$, ps$ > .12$. Thus, the evidence for the argument that the musical selections distracted participants differentially is equivocal. In addition, the direction of this alternative hypothesis is unclear. Does distraction lead to reduced self-focus as the individual turns attention outward to cope with the momentary annoyance? Or does distraction lead to increased self-focus as the individual turns attention inward to withdraw from the external confusion?

The most important point in favor of the use of musical selections, however, lies in the fact that Experiment 2 replicated closely the results of Experiment 1, which did not involve music. Although each affective state manipulation may have some weaknesses, the fact that two different manipulations elicited an identical pattern of results gives credence to the notion that induced affect rather than peculiarities of either affective induction procedure is responsible for our findings.

GENERAL DISCUSSION

Summary of Our Theoretical Approach and the Empirical Findings

Past research pertaining to the influence of affect on self-focused attention has been concerned exclusively with the dimension of affect valence. The present research broadens this debate by introducing the dimension of affect orientation. Based on cognitive appraisal, evolutionary, and action readiness traditions, we articulated the proposal that some affective states (i.e., social states) function to orient the organism outward, whereas other affective states (i.e., reflective states) function to orient the organism inward.

Consider anger and thrill, two opposite-valenced social affective states. Anger has evolved to equip an organism to strike or to flee (Berkowitz, 1990; Plutchik, 1990). Anger often is characterized by disapproval and displeasure at another's actions (Clore et al., 1993), and anger renders the actions of others, as opposed to actions of impersonal situational forces, more salient (Keltner et al., 1993). Thrill has evolved to orient an organism outward toward affiliation and exploration. On the other hand, consider sadness and contentment, two opposite-valenced reflective affective states. These states are characterized by reduced action readiness. Sadness often is associated with an irreversible loss (Smith & Ellsworth, 1985) and with passivity and withdrawal (Frijda, 1986). The actions of situational forces, as opposed to interpersonal forces, are relatively more salient to those experiencing sadness (Keltner et al., 1993). Sadness has evolved to signal that the organism needs time for retrenchment and recovery to consider the implications of the loss for the self. Contentment is associated with goal attainment (Scherer, 1984) and the understanding that further effort is not needed (Ellsworth & Smith, 1988). Contentment has evolved to signal the organism that restful actions and pleasurable diversions are appropriate.

Our specific hypothesis was that social affective states will instigate action tendencies, whereas reflective affective states will instigate inaction tendencies. Thus, the

reflective states will elicit greater self-focus than the social states. Using the state version of the PSC scale and a newly developed measure of behavioral intentions, we replicated in two experiments the result pattern of past research: Compared to thrilled participants, sad participants tended to be more self-focused and also expressed stronger intention to perform introverted behaviors. At the same time, the two experiments confirmed our hypothesis: Participants experiencing reflective affective states self-focused more than did participants experiencing social affective states.

Caveats

We wish to discuss two caveats: the absence of a neutral-affect condition as a control and the possible presence of demand characteristics.

Absence of a neutral-affect condition. Our primary aim was to demonstrate empirically that affect orientation exerts effects on self-focused attention that are above and beyond those exerted by affect valence. For our purposes, we deemed a control (e.g., neutral) affective state unnecessary and perhaps unworkable. Indeed, it is unclear what exactly the nature of the neutral condition ought to be, because we manipulated two (rather than the traditional one) dimensions of affect. Is there a state midway between anger and sadness or midway between contentment and thrill? Nevertheless, without a neutral affect condition, we are unable to determine whether sadness and contentment increase self-focused attention, whether anger and thrill decrease self-focused attention, or whether both of these processes occur. That is, the present research did not address the baseline or default level of self-focused attention.

Possible presence of demand characteristics. In both experiments, we provided the participants with the semantic label for affect (i.e., sad, content, angry, happy). On the face of it, it is plausible that our results are generalizable only to cases in which participants encode semantically the affect label. However, we also took care in assessing participants' affective states, which were in the predicted direction. In fact, we believe that the affective states rather than the affective labels per se were responsible for the obtained results.

This issue invites the question of whether our results are due to demand characteristics. Berkowitz and Troccoli (1986) asserted that four assumptions must be met to implicate demand characteristics as causing a pattern of experimental results. Participants must be

> (1) highly motivated to ensure the study's success even if this means lying to the experimenter and faking their behavior, (2) strongly intent on obtaining evidence regarding the investigation's true purpose, (3) relatively sophisticated in guessing the researcher's hypothesis from the available demand characteristics, [and] (4) eager to confirm this hypothesis. (p. 343)

We doubt that participants were particularly concerned with the success of our (or any) research project (Sigall, Aronson, & VanHoose, 1970). We also doubt that participants were motivated to engage or that they did engage in deep and deliberative thought to discover the experimental hypotheses (Langer & Newman, 1979). Furthermore, we do not believe that participants would have been able to discover our hypotheses, even if they were motivated to do so: (a) The experimental cover story emphasized vivid imagery rather than how affective states influence self-focused attention; (b) it is not clear that lay theories regarding how sadness, contentment, thrill, and anger influence self-focused attention matched the experimental hypotheses; and (c) our design was between-participants.

On the Nature of Social and Reflective States: Clarifications

We wish to clarify two issues that surround our research. The first issue pertains to circular reasoning. How can affective states be classified a priori as either social or reflective? We suggest that the process of cognitive appraisal (Lazarus, 1968, 1991; Mandler, 1984; Ortony et al., 1988) will influence the extent to which a particular affective state increases or decreases action readiness and thus self-focus. The degree and type of cognitive appraisal varies depending on the particular affective state (Izard, 1991). We propose that some affective states require relatively little cognitive construal and do not activate a great deal of the self-concept. These are social affective states. That is, social affective states have evolved so that the cognitive appraisal or interpretation of the situation is best achieved via outward focus. On the other hand, other affective states require a more in-depth meaning analysis. These are reflective affective states. That is, reflective affective states have evolved so that the cognitive appraisal or interpretation of the situation is best achieved through accessing relatively more material from memory to interpret properly the emotion-eliciting incident. Much of this material includes the self-concept.

For example, the experience of fear requires a relatively simple meaning analysis. Kent encounters a mugger in a dangerous neighborhood and realizes that his life may be in jeopardy. Thus, fear likely increases action readiness and is a social affective state. The experience of guilt requires the activation of elements of the self-concept that relate to one's standards so as to interpret the situation as one in which the individual did something inappropriate. Joy eats a pint of Ben and Jerry's ice cream and realizes that she has failed to stick to her diet. Thus, guilt likely decreases action readiness and is a

reflective affective state. The experience of pride might be either social or reflective. Pride in oneself involves comparing an achievement to one's goals and enjoying the success of having reached that goal. This reduces action readiness and is a reflective affective state. However, pride in another person does not strongly engage the self-concept and is likely a social affective state. In summary, locating a particular affective state on the orientation dimension involves a careful examination of the process by which the affective experience is interpreted.

Although at first blush this may appear to be circular reasoning, a second look suggests that it is not. The process of cognitive construal that leads to the identification of a particular affective state is distinct from the resulting degree of self-focused attention. Although distinguishing between appraisal, emotion, and the effects of emotion has posed a challenge to researchers, most would agree that "distinctions can be implemented between appraisal and emotion, and that suggestions of complete correspondence of the relevant concepts tends to downplay the affective, physiological, behavioral, and expressive aspects of emotional syndromes" (Parkinson, 1997, p. 67).

The second issue we wish to clarify is whether the orientation dimension of affect is confounded with arousal. That is, are social affective states associated with higher arousal than reflective affective states? Circumplex theories of affect propose that the essence of affective experience is captured by the two orthogonal dimensions of valence and arousal (Russell, 1980) or, alternatively, of positive affect and negative affect (Watson & Tellegen, 1985). However, we maintain that the orientation dimension is both empirically and conceptually distinct. First, it is unlikely that our affect induction procedures led to differential arousal across the four affective state conditions. Indeed, we agree with Larsen and Diener (1992) that "The majority of mood induction techniques employed in laboratory research . . . appear to involve primarily hedonic state changes, with minimal activation changes" (p. 32). In addition, action readiness or unreadiness has been identified by other affect researchers as distinct from arousal or activation. "One aspect that, no doubt, is missing in the circumplex representation of affect is the component of action readiness" (Larsen & Diener, 1992, p. 45). Although social states and arousing states might be correlated, one readily can think of exceptions. For example, pride in another person may be a social affective state, yet it is likely accompanied by little arousal. Alternatively, shame is a reflective affective state, yet it may be accompanied by a relatively high degree of arousal. However, we hasten to add that it is possible that the arousal dimension and the action readiness dimension covary naturalistically. That is, although they are conceptually distinct, some social affective states may be associated with higher arousal levels, and some reflective affective states may be associated with lower arousal levels. Nonetheless, we conceptualize affect readiness/unreadiness as an orientation or potentiality rather than in terms of differential physiological arousal.

Implications

One implication of the present research involves the potential to resolve an empirical discrepancy. As mentioned in the introduction, although sadness has been shown to increase self-focus, the results regarding happiness have been mixed. Wood et al. (1990) and Sedikides (1992b) found that happiness and neutral affect did not differ significantly in self-focus, whereas Salovey (1992) reported that happiness increased self-focus relative to neutral affect. The present research provides one resolution. The affective state induced by Sedikides (1992b) and Wood et al. (1990) in the happy-affect conditions may have been similar to the state of thrill that we induced in the present experiments. Wood et al. used exhilarating music, and Sedikides (1992b) used visualizing having one's hair done by a skilled hairdresser, winning a free cruise in the Caribbean islands, and winning $1 million in the lottery. In contrast, the affective state induced by Salovey (1992) may have been more similar to the state of contentment that we induced in the present experiments. Indeed, Salovey's instructions simply guided participants to "begin imagining a situation that would make you feel happy" (p. 702).

Another implication of the present findings concerns the possible use of the affect orientation dimension in understanding a variety of psychological phenomena that involve self-focused attention as a correlate—from attributions and alcohol consumption to group interaction, prosocial behavior, and depression. The affect orientation dimension has the potential to elucidate the circumstances that are likely to instigate the onset and cessation of these phenomena. Consider the case of alcohol consumption. Contentment may make one more self-focused and thus less likely to engage in alcohol consumption. On the other hand, anger may lead to external focus and thus increase the likelihood of alcohol consumption.

Concluding Remarks

We are now in a position to answer the questions posed in the introductory paragraph. If you win the Publisher's Clearinghouse sweepstakes, you will focus more on the person with the check and your celebrating relatives than on your inner thoughts and feelings. If a loved one dies, you will become more self-focused, withdrawn, and ruminative. While lounging on a sunny

beach, your contentment will make you eschew thoughts of others for thoughts of how relaxed you feel and how satisfying life seems to be. Finally, your anger resulting from an insensitive collaborator is likely to reduce self-focused attention, so that you will be more attentive toward the external world.

Although the former two answers already were available in the literature, the contribution of the present research lies in the latter two answers. The orientation dimension of affective states shows that the link between affect and attentional focus is more intricate than previously thought.

APPENDIX
Introverted Behaviors Used in Experiment 2

1. Right now, I feel like I would prefer to read a book alone at home.
2. At this moment, I feel like I would rather spend time alone in my room getting my life organized.
3. Right now, I would like to go shopping by myself.
4. At this moment, I would rather sit around and think.
5. I feel like I would prefer to study in a corner of the library right now.
6. At this moment, I think I would rather go jogging by myself.
7. Right now, I feel that I would prefer to play computer games at home rather than go to a party.
8. At this moment, I feel that I would enjoy having a quiet conversation with a good friend.
9. Right now, I think I would enjoy taking a solitary walk.
10. At this moment, I think I would feel uncomfortable spending time with strangers.

NOTES

1. There is some debate in the literature whether the Private Self-Consciousness Scale taps one factor or two factors (Anderson, Bohon, & Berrigan, 1996; Mittal & Balasubramanian, 1987). Those who advocate two factors commonly label them as self-reflectiveness and internal state awareness. There is evidence, for example, that self-reflectiveness but not internal state awareness is associated with psychopathology (Anderson et al., 1996; Conway, Giannopoulos, Csank, & Mendelson, 1993). However, there still is debate over the viability of these potential subscales, and Anderson et al. (1996) cautioned against the use of the subscales in their present form. The results of the two experiments reported in this article were not different across the two subscales. Therefore, we presented overall PSC scores.

2. Similar levels of internal consistency for the PSC scale have been reported by Anderson et al. (1996). However, the second author's work in this area has found higher consistency with the PSC scale. In three experiments, the αs were .84, .88, and .86 (Sedikides, 1992b). The α in present Experiment 1 was moderately higher (.67 instead of .65) when 2 of the 10 items were removed. These items have been problematic in the past (Mittal & Balasubramanian, 1987) and are the two items that are reverse-scored ("Right now, I'm not very aware of myself," "Right now, I'm not scrutinizing myself"). However, results for the eight-item PSC composite were essentially the same as the results for the full scale. The crucial contrast of social versus reflective affective states remained significant, $F(1, 80) = 4.31$, $p < .041$.

3. As in Experiment 1, the α improved moderately (from .57 to .60) when the two reverse-scored items were removed. However, also as in Experiment 1, the results were identical. The crucial contrast of social versus reflective affective states was significant, $F(1, 128) = 7.77$, $p < .006$.

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